

when the EARTH SHAKES



Immerse yourself in interactive exhibits. Jump up and down on a platform, changing how hard you jump, and match the seismogram from an historic earthquake! Watch how the continents move and re-form as you spin the dial through geologic history, from 600 million years ago all the way to 200 million years in the future! See where earthquakes happen all around the world on the Seismic Monitor that shows them in real time; you can see the many hundreds that occur every week and how strong they were. Maybe there was one in your area, too!

See the fast-paced videos of engineers working to make our world safer by using amazing tools and technology to test and improve building techniques and materials. In Puzzled Earth, how quickly can you assemble the map of giant tectonic plates? Hurry, you have 2 minutes before the pieces fall! Test your engineering skills as you design and build your own model of an earthquake-safe building out of blocks and reinforcing rods on the Shake Table platform; then start the quake and see if your structure holds up. Turn the dial to make it shake faster or slower! Can you improve your design and make your building safer?

Explore the science of tsunami waves. Build a structure, then make waves crash on a 'beach' in the 16-foot long Tsunami Tank. Did your structure hold up? Spin the dial, replay the impact in slow-motion, then improve your design. Can it withstand more powerful waves? Find out what happens when you add a seawall.

A SPECIAL EXHIBIT
OCT - DEC
2019

NATIONAL
CORVETTE MUSEUM

BOOK YOUR GROUP!

Grades K-12: \$5
Preschool & Daycare: \$4
Teachers: \$8
One free teacher per 10 students.
Bus drivers are free.
Price includes special exhibit and Corvette exhibits.

GROUP RESERVATIONS REQUIRED

► Debbie Eaton - 270-467-8808
debbie@corvettemuseum.org



WHEN THE EARTH SHAKES CONSISTS OF TWO MAIN CLUSTERS:

1 A set of connected wall panels of different building materials in a mock "earthquake zone," setting the stage for all of its interactive components. The Shake Table is freestanding; the rest of these exhibits are connected to the wall panels.

2 A 16-foot long Tsunami Tank and viewer, with a separate building station; wall panels are attached to each end of the tank.



WHEN THE EARTH SHAKES INTERACTIVES



QUAKE KARAOKE

Try to replicate the motion of any of three different historic earthquakes by bouncing up and down on a platform; see your own seismogram on the monitor in real time as you attempt to match the original seismogram. You'll even get a score! How well did you do?

NEESHUB

At this touchscreen station, learn about the National Earthquake Engineering Simulation (NEES) network, a group of fourteen university research facilities where engineers and scientists have tested buildings and structures with giant shake tables, centrifuges, tsunami tanks, and other large-scale equipment. See some of the different experiments conducted at each of the sites!



PUZZLED EARTH

How quickly can you assemble a map of the Earth according to its plate tectonic boundaries? Press the button to begin, then put the puzzle pieces in place on the big panel. Hurry, you have two minutes before the pieces fall!

PLATES IN MOTION

Spin the dial and watch stunning tectonic motion as the plates move around, break up and reassemble. You can start at 600 million years ago, spin to the present, and then go all the way to 200 million years into the future. Go backward and forward in time. Can you find our current tectonic plate arrangement? You won't even recognize the continents as they'll be 200 million years into the future.



TSUNAMI TANK & VIEWER

See what happens as waves crash on the "beach" in this 16-ft (488 cm)-long tsunami tank with clear sides. Build a structure of plastic blocks, set it on the beach, and see how it holds up to various tsunami waves. A video camera records the action so you can replay the impact of the wave on your structure in slow motion, forwards or backwards, at the Tsunami Viewer station. How well did your structure withstand the tsunami? Re-engineer your design to strengthen and improve it; then try again with a more powerful wave!



SEISMIC MONITOR

See a real-time display, updated every fifteen minutes, that shows the hundreds of earthquakes that have occurred over the past two weeks. Look for larger-magnitude quakes with their bigger circles. Notice how the quakes cluster around the tectonic plate boundaries.



SHAKE TABLE

Be an engineer! Design and build model structures using blocks and reinforcing rods, then turn the dial to test the results against earthquake forces on the shake table. Did your structure stand up? Can you make it safer?

EARTHQUAKE THEATER

Visitors can choose from five fast-paced award-winning videos of scientists and engineers working together to make our world safer during earthquakes. Watch footage of earthquakes and find out what can happen when the earth shakes; learn what causes earthquakes and see how engineers have used amazing tools and technology to test and improve building techniques and materials, even shaking full-size bridges or bending 16-meter (50') pipe sections. (Each video is about 1 ½ minutes long.)



This exhibition was developed by Sciencenter in Ithaca, New York, with funding from the National Science Foundation and NEES, the National Network for Earthquake Engineering Simulation.

HOLD ON TIGHT!

CORVETTEMUSEUM.ORG/TEACHER